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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,310	11/18/2003	Abdul Malik	USF-236XT	7300

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SALIWANCHIK LLOYD & SALIWANCHIK
A PROFESSIONAL ASSOCIATION
PO BOX 142950
GAINESVILLE, FL 32614-2950

EXAMINER	
THERKORN, ERNEST G	
ART UNIT	PAPER NUMBER
1797	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/716,310	MALIK ET AL.	
	Examiner	Art Unit	
	Ernest G. Therkorn	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,18-25 and 28-34* is/are pending in the application.

4a) Of the above claim(s) *5,22 and 23* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-10,18-21,24,25 and 28-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claims 30-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. No support for "the root of said dendrimer moiety" can be found. The reference on page 32, line 2 of paragraph 167 in the specification to root is to the root of dendritic reagents and not to the dendrimer moiety per se. As such, the claims are considered to be drawn to new matter.

Claims 30-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what the metes and bounds of "root" are. The remarks appear to urge that "root" expresses a particular orientation. However, a reasonable interpretation of "root" would be any anchor point of the dendrimer. As such, the term "root" renders the claims indefinite.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 8-10, 18-21, 28, and 29-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malik (WO 00/11463) in view of either Kim (U.S. Patent Pub. No. 2002/0020669) or Neumann (DE 19,621,741) and the PTO 03-679 translation of Neumann (DE 19,621,741). PTO 03-679 translation of Neumann (DE 19,621,741) will

serve as a translation of Neumann (DE 19,621,741). At best, the claims differ from Malik (WO 00/11463) in reciting use of a dendrimer. Kim (U.S. Patent Pub. No. 2002/0020669) (paragraphs 9-10) discloses that dendrimers bonded on supports are economically feasible, versatile, and useable in chromatography. PTO 03-679 translation of Neumann (DE 19,621,741) on page 2, lines 3-10 discloses that use of dendrimers increases the number of functional groups thereby improving separation. It would have been obvious to use a dendrimer in Malik (WO 00/11463) because Kim (U.S. Patent Pub. No. 2002/0020669) (paragraphs 9-10) discloses that dendrimers bonded on supports are economically feasible, versatile, and useable in chromatography. It would have been obvious to use a dendrimer in Malik (WO 00/11463) because Neumann (DE 19,621,741), as evidenced by PTO 03-679 translation of Neumann (DE 19,621,741) on page 2, lines 3-10, discloses that use of dendrimers increases the number of functional groups thereby improving separation.

Claims 6, 7, 24, 25, and 29-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malik (WO 00/11463) in view of either Kim (U.S. Patent Pub. No. 2002/0020669) or Neumann (DE 19,621,741) and the PTO 03-679 translation of Neumann (DE 19,621,741) as applied to claims 1-4, 8-10, 18-21, 28, and 29-34 above, and further in view of Newkome (U.S. Patent No. 5,703,271). At best, the claims differ from Malik (WO 00/11463) in view of either Kim (U.S. Patent Pub. No. 2002/0020669) or Neumann (DE 19,621,741) and the PTO 03-679 translation of Neumann (DE 19,621,741) in reciting use of isocyanate. Newkome (U.S. Patent No. 5,703,271) (column 7, lines 11-46) discloses isocyanate dendrimers have the flexibility of reacting

with various chemical surfaces including siloxane and can be used in "column chromatography or the like for the selective removal of agents from the material flowing through the column." It would have been obvious to use isocyanate in Malik (WO 00/11463) in view of either Kim (U.S. Patent Pub. No. 2002/0020669) or Neumann (DE 19,621,741) and the PTO 03-679 translation of Neumann (DE 19,621,741) because Newkome (U.S. Patent No. 5,703,271) (column 7, lines 11-46) discloses isocyanate dendrimers have the flexibility of reacting with various chemical surfaces including siloxane and can be used in "column chromatography or the like for the selective removal of agents from the material flowing through the column."

The remarks urge patentability based upon the definition of root provided by Zacharopoulos, Macromolecules 2002, 35, 1814-1821. The definition provided by Zacharopoulos, Macromolecules 2002, 35, 1814-1821 would appear to be the page 1816, column 1, line 15, passage that has roots in parenthesis after the word "end." This would not appear to be a comprehensive definition of the term "root." It merely suggests that an end may be a root.

The remarks urge that Kim (U.S. Patent Pub. No. 2002/0020669)'s point of attachment is limited to the crown of his dendrimer. However, the word "crown" does not appear in Kim (U.S. Patent Pub. No. 2002/0020669).

The remarks urge patentability based upon the orientation of the dendrimer. However, the word "root" is not considered to be specific to any particular orientation. The "root" would appear to be any point of attachment of the dendrimer to the sol gel.

In any event, Neumann (DE 19,621,741) and the PTO 03-679 translation of Neumann (DE 19,621,741) show the proper orientation in Figures 1 and 2.

Applicants urge on page 8 of the remarks that root is supported because the word "dendron" is derived from the word "tree." However, page 9, line 10 of the remarks would appear to ascribe a more particular meaning to root because conventional dendrimers lack applicants' particular root. As such, the specification lacks support for both roots in general and particular roots.

The remarks appear to urge that it is not technically possible to bond dendrimers to a support. However, Kim (U.S. Patent Pub. No. 2002/0020669) (paragraphs 9-10) discloses that dendrimers bonded on supports are economically feasible, versatile, and useable in chromatography. PTO 03-679 translation of Neumann (DE 19,621,741) on page 2, lines 3-10 discloses chemically bonding dendrimers to a stationary phase.

The remarks urge that it is not technically possible to bond dendrimers to a support with isocyanate. However, Newkome (U.S. Patent No. 5,703,271) (column 7, lines 11-46) discloses isocyanate dendrimers have the flexibility of reacting with various chemical surfaces including siloxane and can be used in "column chromatography or the like for the selective removal of agents from the material flowing through the column."

The remarks urge patentability based upon reaction speed. However, the claims are directed to product claims and not to a method of making. As such, the reaction speed is not considered to be pertinent.

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (571) 272-1149. The official fax number is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Ernest G. Therkorn/
Ernest G. Therkorn
Primary Examiner
Art Unit 1797

EGT
January 5, 2009